

CLAIMS

1. In a continuous mixer apparatus adapted for comingling of particulate thermoplastic materials of varying polymeric compositions, having a mixer barrel, at least one main rotor with a helical profile body section, a driven journal located at the opposite end, a drive end rotor pilot component, a drive end, packing seal retainer, and a drive end visco seal assembly, and a packing gland seal means, further comprising a sleeve assembly, a metallic liner adjacent the sleeve assembly, a circular visco seal, an oil seal packing component disposed about the periphery of the visco seal, and an oil seal packing seal retainer component for the sleeve subassembly adapted for compressing the packing component, the improvement being in the oil seal retainer component which comprises:

(a) an annular channel provided substantially centrally of the inner periphery of the seal retainer component being defined by the component inner periphery and the opposing outer periphery of the visco seal;

(b) an at least one elongate fluid conduit adapted for pneumatic air supply to the seal retainer component connecting between the annular channel and the outer periphery of the visco seal; and,

(c) a means for supply of pneumatic air to the external end of the fluid conduit..

2. The improved packing seal retainer of Claim 1 wherein the each packing component has a substantially squared cross section.

3. The improved oil seal retainer of Claim 1 wherein each seal component is of a material selected from one of the fluoroelastomers with a repeating structure $-\text{CF}_3-\text{CH}_2-\text{CF}_2-\text{CF}(\text{CF}_3)-$ (VITON).

4. The oil seal retainer component of Claim 1 in which the inner periphery thereof is adapted to receive the outer flat surface of the visco seal so that the oil seal components can ride thereon.

5. The packing seal retainer component of Claim 1 wherein the outer peripheral thereof is provided with a truncated segment presenting a planar surface adapted to abut the companion seal retainer.

6. The packing seal retainer component of Claim 1 wherein the mated seal house and opposing visco seal components are configured so as to provide an annular-shaped, port about the drive end sub-assembly, whereby a positive air pressure supply can be directed from an external source to the sealed retainer annular channel, so as to provide for continuous fluid air purgation of the drive end, visco seal assembly in operation.

7. The seal retainer component of Claim 1 wherein the fluid conduit is aligned radially within the seal house member of seal retainer component.

8. In a continuous mixer apparatus adapted for commingling of particulate thermoplastic materials of varying polymeric compositions, and having a mixer barrel, at least one main rotor with a helical profile body section at one end thereof, a driven journal located at an opposite drive end thereof, a drive end rotor plate, a drive end packing seal retainer, and a packing gland seal means at the drive end, the improvement in the packing gland seal means which comprises:

(a) a bushing-like, visco sleeve assembly having a cylindrical inner surface being provided with an integral continuous, first peripheral annular ridge located proximal to one longitudinal end of the sleeve assembly, which one end is distal from the helical profile body;

(b) a double, oil seal sleeve-shaped, metallic liner positioned adjacent the inner periphery of the sleeve assembly;

(c) a sleeve-like, circular visco seal, being stepped-down intermediate the ends thereof having first and second cylindrical peripheries, with the lesser diameter, periphery seal being located distal from the helical profile body section, and with the larger diameter periphery seal being provided with a visco seal threading, and with the sleeve assembly and circular visco seal defining an annulus-type inner chamber therebetween;

(d) a single, rope-like first packing component positioned about the visco seal periphery and abutting the annular ridge of the sleeve subassembly; and

(e) said oil seal retainer being L-shaped and positioned adjacent the sleeve subassembly and also abutting and compressing laterally the first oil component.